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(54) METHOD AND DEVICE FOR DETECTING AIR
PRESSURE DROP OF TIRE

pressure of air in any tire is detected.

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(57) Abstract:

PURPOSE: To detect a tire, whose pressure of air is dropped, inexpensively, sensitively, accurately and further quickly by detecting a rotational speed changed of a tire, eliminating a primary factor of fluctuation except a pressure of air influencing upon a dynamic load radius of the tire, abstracting a relation between the pressure of tire air and the dynamic load radius, and detecting the pressure of tire air changed.

CONSTITUTION: An analog signal given from a wheel speed sensor 1 is binary code processed in an ABS control unit 6, and a control unit 11 for a tire air pressure drop detector (DWS) receives supply of wheel speed pulses from the ABS control unit 6, to detect a pressure drop of air in tires W1 to W4. Now when assumed F1 to F4 for rotary angular speeds of the four tires, ratio $dF = (F1+F4)/(F2+F3)$ of the sum F1+F4 of rotary angular speeds of a pair of the tires on a diagonal line to the sum F2+F3 of rotary angular speeds of another pair of the tires is obtained, and except at the time of a relation where $(1-a) < dF < (1+a)$, decreased

